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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,136	09/27/2001	Richard Joseph McConnell	ST00025USU (123-US-U1)	4922

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EXAMINER	
BURD, KEVIN MICHAEL	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
05/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/967,136	MCCONNELL, RICHARD JOSEPH	
	Examiner	Art Unit	
	Kevin M. Burd	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 April 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. This office action, in response to the request for continued examination and the amendment filed 4/27/2009, is a non-final office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/27/2009 has been entered.

Response to Arguments

3. The newly added limitation is addressed in the rejection stated below.

4. A new drawing objection is stated below.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method steps recited in the claims must be shown or the features canceled from the claims. The timing diagrams of the figures do not show the recited method steps of the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al (US 6,370,208) in view of Lundby et al (US 6,285,655) further in view of Underbrink (US 6,650,879).

Regarding claims 1 and 3-5, Kuo discloses a correlator for CDMA applications. An incoming spread spectrum signal is received. In spread spectrum receivers, to despread the spread signal, the received signal is correlated with the appropriate spreading code (PN code) to recover the originally transmitted data. This correlation takes place is described in column 1, lines 22-25 and column 2, lines 34-43. Kuo also discloses using I/Q spreaders to recover the data in column 2, lines 34-43. Therefore, the correlation process correlates the received signal with PN codes. The correlators categorize different combinations of code sequences and identify locations for which code elements for the code sequences are equivalent. The despreading operation is performed once for each equivalent combination (abstract). The ability to derive correlator outputs for multiple codes from these terms allows redundant computations to be eliminated (column 5, lines 1-5). Claim 1 of the reference discloses the method of demodulating the signal as well. The locations where the code elements are equivalent are determined and the redundant calculations are removed. The correlation and despreading is dependent on the received signal. The spreading code of the receiver and the received signal must be the same for the correlation and despreading to be conducted properly. Therefore, the correlation process stored in the table is constructed for one of the terms of the spread spectrum signal. Though Kuo discloses correlating the I and Q signals, Kuo does not explicitly show the I and Q signals are accumulated

separately. Lundby discloses the CDMA receiver shown in figure 4. The receiver separates the received signal into I and Q components. The I and Q signals are separately correlated using a short PNI sequence and a short PNQ sequence (column 7, lines 51-57). The despread I and Q signals are separately input to accumulators 324a and 324b, as shown in figure 4, to accumulate the data over the 64-chip interval (column 7, lines 58-66). Using the prior art components of a CDMA receiver will allow for proper reception and recovery of the transmitted signals in the communication system. In addition, when a received signal is separated into its I and Q components, separate I and Q correlation takes place to despread the signal. The despread components are then combined. This is what is done in CDMA receivers. For these reasons, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the typical components of a CDMA receiver as shown by Lundby into the CDMA receiver of Kuo.

The combination of Kuo and Lundby does not disclose the receiver is a GPS receiver. Underbrink discloses the personal communication device with GPS receiver shown in figure 3. The GPS receiver comprises a GPS receiver as well as a CDMA transceiver. The GPS receiver of Underbrink allows numerous types of signals to be received. The provisions share a common clock source (column 2, lines 19-30). This minimizes the physical size of the on-board battery (column 1, lines 14-28) as well as the inherent advantageous of GPS. For these reasons, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Underbrink into the method of Kuo and Lundby.

Regarding claim 2, Kuo discloses partial summation is used in the correlator (column 4, lines 58-63).

Regarding claims 6 and 7, Kuo discloses the redundant calculations are determined and removed from the calculations. The non-redundant calculations will be computed using the correlation process.

Regarding claim 8, Kuo discloses the use of I/Q spreading in the RAKE receiver (column 2, lines 34-43).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M. Burd/
Primary Examiner, Art Unit 2611
5/16/2009